DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	CHILDS BOG	Lake Area (ha):	42.65
Town:	HARRISVILLE	Maximum depth (m):	5.4
County:	Cheshire	Mean depth (m):	2.8
River Basin:	Connecticut	Volume (m^3):	1176500
Latitude:	42°57'28" N	Relative depth:	0.7
Longitude:	72°07'30" W	Shore configuration:	1.47
Elevation (ft):	1375	Areal water load (m/yr):	4.68
Shore length (m):	3400	Flushing rate (yr^{-1}):	1.70
Watershed area (ha):	362.6	P retention coeff.:	0.67
% watershed ponded:	0.0	Lake type:	artificial

BIOLOGICAL:		14 January 1999	7 July 1998
DOM. PHYTOPLANKTON (% TOTAL)	#1	NO WINTER PLANKTON	ASTERIONELLA 30%
	#2	ANALYZED	SYNURA 15%
	#3		PERIDINIUM 15%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			3.46
DOM. ZOOPLANKTON (% TOTAL)	#1		CLADOCERAN SPP 23%
	#2		KERATELLA 20%
	#3		CALANOID COPEPOD 18%
ROTIFERS/LITER			99
MICROCRUSTACEA/LITER			126
ZOOPLANKTON ABUNDANCE (#/L)			248
VASCULAR PLANT ABUNDANCE			Sparse
SECCHI DISK TRANSPARENCY (m)			2.5
BOTTOM DISSOLVED OXYGEN (mg/L)			1.9
BACTERIA (E. coli, #/100 ml)	#1		1
	#2		< 1
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 3.6
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : None

CHEMICAL:

Lake: CHILDS BOG
Town: HARRISVILLE

	14 January 1999		7 July 1998		
DEPTH (m)	1.5	3.0	2.0		4.5
pH (units)	6.0	5.8	6.1		5.6
A.N.C. (Alkalinity)	1.7	1.2	1.2		1.3
NITRATE NITROGEN	0.09	0.06	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.30	0.20	0.30		0.20
TOTAL PHOSPHORUS	0.008	0.009	0.009		0.014
CONDUCTIVITY (μmhos/cm)	65.8	64.3	59.0		58.0
APPARENT COLOR (cpu)	23	22	14		21
MAGNESIUM			0.55		
CALCIUM			1.0		
SODIUM			8.3		
POTASSIUM			0.40		
CHLORIDE	15	14	12		12
SULFATE	4	4	4		4
TN : TP	49	29	33		14
CALCITE SATURATION INDEX			5.1		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1998

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	0	0	3	Oligo.

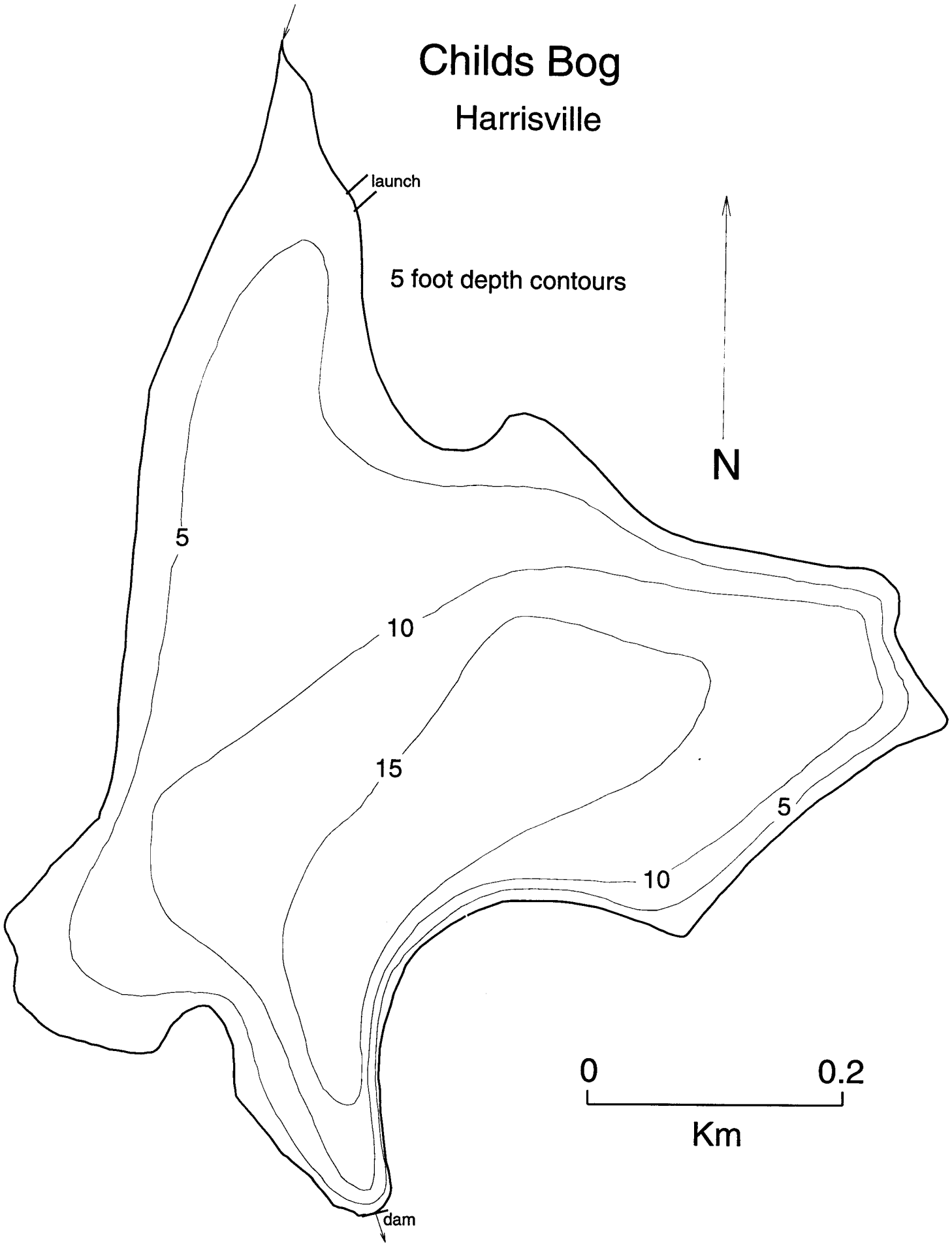
COMMENTS:

1. Childs Bog was previously surveyed and classified in 1984. There was no change in trophic class and little change in trophic quality between the two dates.

2. This artificial pond was drawn down every winter for many years. Beginning in the winter of 1997-98 it is no longer scheduled to be drawn down. We anticipate the rooted plant growth will increase in future years since the pond bottom won't be subjected to exposure, desiccation and freezing.

3. Launch site for small boats was located near the northern end.

4. No cottages located along the shore.


Childs Bog
Harrisville
launch
5 foot depth contours
N
5
10
15
5
10
0
0.2
Km
dam

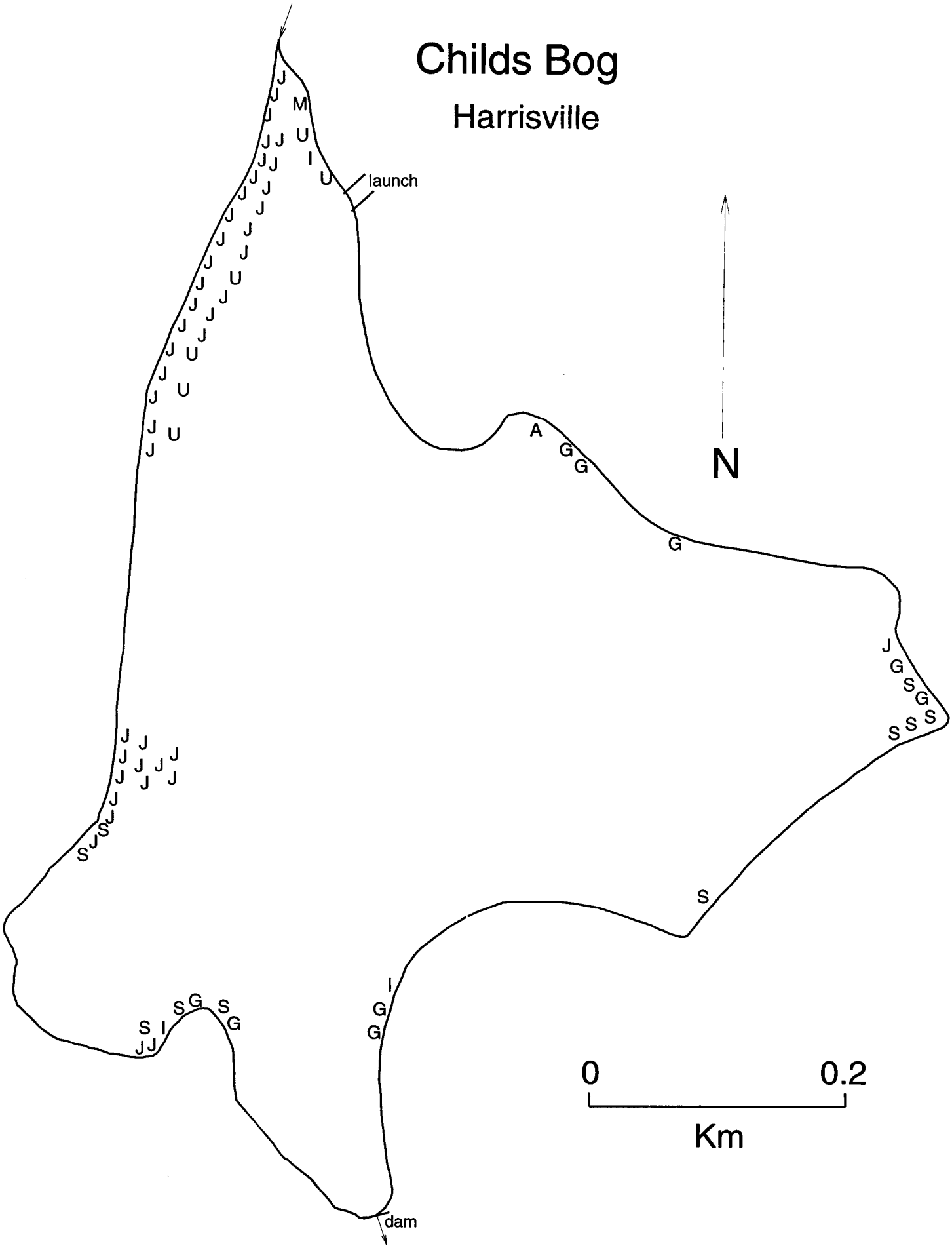
FIELD DATA SHEET

LAKE: CHILDS BOG TOWN: HARRISVILLE
DATE: 07/07/1998 WEATHER: MOSTLY OVERCAST

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	22.4	9.2	105 %
	1.0	22.4	9.0	103 %
	2.0	22.3	9.1	104 %
	3.0	22.1	8.2	93 %
	4.0	18.7	2.7	28 %
	4.5	18.1	1.9	20 %

SECCHI DISK (m): 2.5 COMMENTS:
BOTTOM DEPTH (m): 5.0
TIME: 1145

*Dissolved oxygen values are in mg/L


Childs Bog
Harrisville
launch
N
0
0.2
Km
dam

AQUATIC PLANT SURVEY

LAKE: CHILDS BOG TOWN: HARRISVILLE DATE: 07/07/1998

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
J	Juncus	Rush	Sparse
U	Utricularia	Bladderwort	Sparse
S	Sparganium	Bur reed	Sparse
I	Iris	Iris	Sparse
G	Gramineae	Grass family	Sparse
A	Sagittaria	Arrowhead	Sparse
M	Myriophyllum humile	Water milfoil	Sparse

OVERALL ABUNDANCE: Sparse

GENERAL OBSERVATIONS:

1. Many stumps observed in the northern end.